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09/653,272	08/31/2000	Salman Akram	4181US (96-973.2)	4727

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EXAMINER	
GARLAND, STEVEN R	

ART UNIT	PAPER NUMBER
2125	7

DATE MAILED: 01/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/653,272	Applicant(s) AKRAM ET AL.	
	Examiner Steven R Garland	Art Unit 2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *8/31/00,7/26/01,11/26/03*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-108* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-108* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 August 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4,5,6* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 120 as follows:

An application in which the benefits of an earlier application are desired must contain a specific reference to the prior application(s) in the first sentence of the specification of in an application data sheet (37 CFR 1.78(a)(2) and (a)(5)). The specific reference to any prior nonprovisional application must include the relationship (i.e., continuation, divisional, or continuation-in-part) between the applications except when the reference is to a prior application of a CPA assigned the same application number.

Remarks: the instant application on page 2 appears to claim priority on the basis of two U.S. applications (09/292,655 and 08/871,015). The declaration however appears to claim priority on the basis of these two applications and 7 additional applications and it is uncertain what applications are being used to claim priority.

Additionally to claim priority on the basis of 35 U.S.C. 120 there must be at least one common inventor, and several applications such as application 08/591,238 listed in the declaration fail to have a common inventor with the instant application, so no priority claim under 35 U.S.C.120 can be made.

2. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

As pointed out above some of the applications listed in the claim for priority under 35 U.S.C. 120, in the declaration, fail to have a common inventor with the instant application and priority can not be claimed without at least one common inventor.

3. The disclosure is objected to because of the following informalities: the status of the various copending applications such as those listed on page 2 should be updated.

Appropriate correction is required.

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-108 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-26 of U.S. Patent No. 5,907,492 (cited by applicant). Although the conflicting claims are not identical, they are not patentably distinct from each other because for example comparing instant claim 38 to claim 26 of the patent; both are directed to a MCM manufacturing process for diverting good but unrepairable devices from the process; in both the devices have a substantially unique ID; both store data in association with the ID identifying devices that are good and repairable, good but unrepairable, and that are bad; both require

automatically reading the ID code of the devices; and both access data stored in association with the ID code; both divert devices identified as good but unrepairable to other processes; and both discard bad devices.

The patent claim however specifies that the devices are IC dice which is obviously a specific form of the device used in the instant claim and it would have been obvious to one of ordinary skill in the art to regard such a dice as a specific form of the device in instant claim 38. Similar comparisons can be made for the other claims.

6. Claims 1-108 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-35 of U.S. Patent No. 6,363,295 (cited by applicant). Although the conflicting claims are not identical, they are not patentably distinct from each other because for example comparing instant claim 25 to claim 21 of the patent, both are directed to a method of manufacturing Multi-Chip Modules from semiconductor wafers; both provide a plurality of wafers; both fabricate devices on the wafers; in both the devices store a substantially unique ID; both store data in association with the ID identifying processes the devices have undergone; both separate the devices; both assemble the devices; both automatically read the ID; and both access data associated with the ID.

The patent claim however specifies that the data stored in association with the ID includes repair data not required by instant claim 25.

It would have been obvious to one of ordinary skill in the art to eliminate the additional data if it is not required so that a smaller memory could be used. Similar comparisons can be made for the other claims.

7. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

8. Claim 38 is rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 34 of prior U.S. Patent No. 6,363,295. This is a double patenting rejection.

9. Claims 1-108 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-35 of U.S. Patent No. 6,553,276 (cited by applicant). Although the conflicting claims are not identical, they are not patentably distinct from each other because for example comparing instant claim 28 to claim 24 of the patent both are directed to manufacturing method for semiconductor devices from semiconductor wafers; both require fabricating, probing, repairing, programming, storing, mounting, sawing, automatically picking, placing, curing, wire bonding, encapsulating, curing, deflashing, electroplating, singulating, testing, burn in testing, back in testing, automatically reading, accessing, evaluating accessed data, repairing, and discarding as set forth in detail in the claims.

The patent claim however requires the additional step of receiving at least one unrepairable device diverted from another manufacturing method not required by instant claim 28.

It would have been obvious to one of ordinary skill in the art to eliminate the additional receiving step when the additional manufacturing method is not available. Similar comparisons can made for the other claims.

10. Claims 1-108 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 10/401209. Although the conflicting claims are not identical, they are not patentably distinct from each other because for example comparing instant claim 1 to claim 1 of the copending application; both are directed a manufacturing process for devices; both use data for manufacturing processes that have been previously performed on the devices to select manufacturing processes; both use a substantially unique identification to identify the devices; both store data in association with ID to identify manufacturing procedures the devices have undergone; both automatically read the ID code; and both access the data stored in association with the ID code.

The copending claim 1 recites additional details not required by instant claim 1. Claim 1 requires that the device be a memory device, that the stored data identify repairs made and spare rows and columns to make repairs and assembling the devices into packages.

It would have been obvious to one of ordinary skill in the art to make the memory devices using integrated circuits, that the repair data is a specific type of data identifying previous manufacturing procedures that the devices have undergone and

that data on the spare columns and rows can be eliminated along with assembling the devices to simplify the system. Similar comparisons can be made for the other claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claims 1,2,7-11,40,41,46,47, and 50-53 are rejected under 35 U.S.C. 102(e) as being anticipated by Beffa 5,927,512 (cited by applicant).

Beffa discloses identification of an IC, use of a fuse or optical ID, reading the ID, storing data associated with the ID; testing, and accessing data to control processing. See the abstract; figures; col. 1, line to col. 3, line 67; col. 4, line 60 to col. 5, line 50 ; col. 6, lines 3-65.

13. Claims 1,2,6-11,17-27,40,41,45-47,50-53,59-63,66-68,73,74,80-83,86-88,93,100-103,106, and107 are rejected under 35 U.S.C. 102(e) as being anticipated by Beffa 5,915,231 .

Beffa discloses identification of an IC, use of a fuse or optical ID, reading the ID, storing data associated with the ID; testing, and accessing data to control processing. Beffa further teaches singulating; forming MCM devices, curing, bonding, sawing, etc. See the abstract; figures; col. 1, lines 28-67; col. 2, line 29 to col. 3, line 47; col. 3, line 59 to col. 4, line 44; and note the claims. Further note is taken that the devices when correctly processed have information associated with the ID that provides information as to the processes they have undergone.

14. Claims 1,2,6,8,10,17-19,25,26,40,41,45,47,49,50,59-61,65,80,81,85,100,101, and 105 are rejected under 35 U.S.C. 102(b) as being anticipated by Shils et al. 4,510,673 (cited by applicant).

Shils et al. discloses identification of an IC, optically reading the ID, testing, probe testing, bar coding, storing information associated with the ID, using the information to control processing, forming multi chip modules, . See the abstract; figures; col. 1, lines 7-43; col. 2, lines 61-64; col. 3, lines 11-58; col. 4, lines 17-60; col. 5, lines 7-67; col. 6, lines 17-49; and the claims.

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

16. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

17. Claims 3,11, and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shils et al. 4,510,673.

Shils et al. discloses identification of an IC, optically reading the ID, testing, probe testing, bar coding, storing information associated with the ID, using the information to control processing, forming multi chip modules, . See the abstract; figures; col. 1, lines 7-43; col. 2, lines 61-64; col. 3, lines 11-58; col. 4, lines 17-60; col. 5, lines 7-67; col. 6, lines 17-49; and the claims.

Shils however does not specifically state that data is stored related to repairs or specifically identify the type of test at which the ID is read.

Shils does teach reworking (repairing) and storing additional information for later use and testing. Note col. 6, lines 17-49.

It would have been obvious to one of ordinary skill in the art to modify Shils to store data related to the rework so that it could be used at a later time and further it would have been obvious to one of ordinary skill in the art to modify Shils to access the stored data at the back end test so that defective devices are not shipped.

18. Claims 68-72, and 88-92 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beffa 5,915,231 in view of Vu et al. 5,256,562.

Beffa discloses identification of an IC, use of a fuse or optical ID, reading the ID, storing data associated with the ID; testing, and accessing data to control processing. Beffa further teaches singulating; forming MCM devices, curing, bonding, etc. See the abstract; figures; col. 1, lines 28-67; col. 2, line 29 to col. 3, line 47; col. 3, line 59 to col. 4, line 44; and note the claims. Further note is taken that the devices when correctly processed have information associated with the ID that provides information as to the processes they have undergone.

Beffa however does not teach the use of a laser or water jet for cutting. Beffa however does teach sawing and singulating. Note claim 23 for example.

Vu et al. teaches the alternatives of a laser, water jet, or saw to separate semiconductor elements. See col. 7, lines 33-42.

It would have been obvious to one of ordinary skill in the art to modify Beffa in view of Vu and use a laser or water jet to separate the devices. This would provide a longer lasting cutting element.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven R Garland whose telephone number is 703-305-9759. The examiner can normally be reached on Monday-Thursday from 6:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard, can be reached on 703-308-0538. The fax phone number for the organization where this application or proceeding is assigned is 703-746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-3900.

SRG

Steven R Garland
Examiner
Art Unit 2125

LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100